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VARIATION OF PLURAL IMPERATIVE MARKING IN ARCHI

1. Introduction

Imperative in Archi is expressed by a special verb stem. Imperative is used for urging (1), but it also can be used with 3rd person subject with the meaning of blessing or cursing (2):

(1) *lobur, noʟ'-a-ši zaba*
child.PL house-IN-ALL **come.IMP**
'Children, go home!'

(2) *lobur χ:ʷa:ra-ši zaba*
child.PL be.glad-CVB **come.IMP**
'May children come back joyfully!' (lit. 'Children joyful come back')

Therefore, Imperative can occur with 1st or 3rd person subjects. Blessing and cursing constructions can be distinguished from imperative constructions only pragmatically, based on the meaning of the verb and on broader context.
     Unlike quite a few other Daghestanian languages, the form of the Archi imperative does not depend on the transitivity of verb - except in the plural. Archi imperative can mark plural addressee with the suffix *–r*:

(3) Kibrik 1977: 220
w-arha   *buwa-s*   *χir*
1-think.IMP   mother-DAT   about
Think about your mother.

(4) Kibrik 1977: 220
arha-r   buwa-s   χir
PERSPL.think.IMP-**IMP.PL**   mother-DAT   about
'You all, think about your mother.'

Imperative plural marking does not occur with transitive verbs:

 (5) *χīta ja-r-mi*   *bo-li*   *zari*   *χabar*   *a‹b›tī-qi*   *bo-li*
    then this-2-OBL(ERG) say.PF-EVID   I.ERG   story(NOM)   ‹3›let.PF-POT   say.PF-EVID

 daʟ'   ***daq̄Iʼa***
 door(NOM)   **4.lock(IMP)**
(05.62) 'Then she told (them) - I will tell you a story, but first (you.pl) close the door.'.

Prohibitives do not attach the marker *-r*. Labile verbs do not attach *-r* when they are used transitively, but may attach it when they are used intransitively:

(6) *č'ele-t:u   cabRa*
    stone-PL   throw.IMP
'Throw the stones!'

(7) *ž̌ʷen   caRa-r*
you.PL   fall.IMP-IMP.PL
Fall down.

     The Archi plural marker -r is **optional** (reported by Kibrik, confirmed by our own field research). Most speakers allow both marked and unmarked form when referring to plural addressee:

(8) ž̌ʷen   arha(-r)   buwa-s   χir
you.PL   PERSPL.think.IMP(-**IMP.PL**)   mother-DAT   about
You all, think about your mother.

In optative constructions, the suffix is optional just as with imperatives.

2st person plural
(9) žʷen c'at'ur-t:-ib   k-a(-r)!
you.PL be.clever-ATR-ATR.PL   **PERSPL.become-IMP(-IMP.PL)**
'May you (plural) become clever!'

<u>Problem setting</u>

- Which volitional utterances are more likely to use the suffix *-r*, and which are less? What semantic or formal factors contribute to this variation?

- Are there any social patterns of variation (most likely, the age of the speaker)?

<u>Method</u>

- Elicitation?
... fails, because most speakers accept both forms (the more trained and smarter the consultant is, the quicker he understands that variation is always possible - and becomes useless).

- Corpus?
... not enough examples, but see Section 2.

- Experiment (see Section 3).

2. Corpus
The plural intransitive imperative is not a frequent form - only 25 example were found in all texts. As Table 1 shows, most intransitive verbs of movement have suffix *-r* with plural addressee. Three imperatives which have no *–r* (*č'eba, zaba, ašba*) are irregular suppletive forms. Potentially, these forms can also attach *-r*. In the corpus, variation is only attested for the suppletive form *č'eba*.

with suffix *-r*	number of tokens	without *–r*	number of tokens
ak:i-r PERSPL.go.away(IMP)-PL.IMP	6		
h-erqˁa-r PERSPL-walk(IMP)-PL.IMP	6		
oqˁa-r PERSPL.go(IMP)-PL.IMP	4		
č'e-r PERSPL.входить.IMP-IMP.PL	1		
oci-r PERSPL.stand.IMP-IMP.PL	1		
q'iˁjq'i-r sir-IMP.PL	1		
č'eba-r let's.go-PL.IMP	1	č'eba let's.go	1
		zaba come.IMP	3
		ašba wait! (beware!)	1
total	*20*		*5*

Table 1. Intransitive plural imperatives in the corpus

3. Experiment
Sentences with intransitive imperatives were constructed together with an Archi consultant. Each sentence was suggested to the respondents in Russian who were asked to translate it into Archi. If the respondent translated the sentence using a verb different from the one used in the constructed example, I asked him to produce an alternative translation. The presence or absence of *-r* was registered for each example with each speaker. The list contained 42 imperative sentences, but not all sentences were translated by all speakers. There were also 13 sentences which were

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translated by 5 or 6 speakers only; these will not be discussed in this paper. 34 speakers of different sex and age took part in the experiment. In general, there are about 1400 sentences where -r may (potentially) occur.

The experiment was carried out in 2007 and 2008 in Archib. It is my pleasure to thank all Archi consultants who took part in the experiment, and Bulbul Musaeva who was far too smart for it, but helped me a lot with elicitation and analysis.

3.1. The list of imperative sentences

The list of the imperative sentences included in the experiment is in the attachment. All sentences were annotated for certain parameters which were expected to play role in the usage of the marker -r. These parameters are listed below.

- The meaning of movement
As shown in Section 2, the verbs of movement usually had *-r* in corpus.

- The meaning of control
Imperative generally implies that the action is controlled by the addressee. Still, imperatives often can be derived from the verbs which denote the actions with low level of control, modifying its meaning: *Laugh!* ='make attempts to laugh'. Several imperative sentences with the verbs denoting low control actions were included in the list:

(10) *žʷen eˁmma(r)* 'cry!'
(11) *gudummuχur žʷen oq'a(r)* 'lose [the game] to him'
(12) *žʷen godormit maˁrška(r)* 'be jealous'

- Blessing or cursing
Volition over uncontrollable situations are most often wishes. The list contained many sentences with the meaning of blessing or cursing with the 2nd or 3rd person.

(13) *žʷen abij buχiχilli eχ:a(r)* 'May you lose your parents'
(14) *wiš noɫdor dimma(r)* 'May your houses be destroyed'

- 3rd person subject
The constructions where the nominative was 3rd person were also marked separately:

(15) *wiš lobur labχanbaka(r)* 'May your children become more numerous'
(16) *wiš č'abu χa(r)* 'May your sheep be found'

- Inanimate subject or nonhuman subject
Among the constructions with 3rd person subject, I marked separately those with inanimate or nonhuman subject:

(17) *wiš aqur q'ˁárt'ba(r)* 'May your legs get dislocated'
(18) *wež uwtib sababmul q'ubulka(r)* 'May this amulet suit you'

- The verbs derived from *-bos* 'speak'
During the experiment, it was found out that the intransitive verbs which are based on the verb *bos* 'speak' are less capable of having *-r* than other verbs. This might be due to the fact that the verb *bos* (imperative *ba*) is transitive. I included the verbs *dimmus* 'destroy', *eˁmmus* 'cry', *q'ˁárt'bos* 'dislocate' about leg, *k'urbos* 'sleep', *q'ač'bos* 'get dressed', *t'ank'bos* 'jump', *qebus* 'dance'.

3.2. The results
3.2.1. Linguistic distribution
According to logistic regression analysis (courtesy Misha Daniel), the strongest contribution comes from the following '*r*-prohibiting' factors: the *bos*-verbs, 3rd person subjects, and non-human subjects. The semantics of movement and (to a lesser extent) control are the factors which favor the use of *-r*. The semantics of blessing and cursing did not play any significant role.

Figure 1 illustrates the relative frequency of -r marking of *bos*-verbs. More controllable situations ('dance!') get *r*-marking more frequently comparing to less controllable 'cry!' or totally uncontrollable 'May your legs be dislocated'. No *bos*-verb had the marker *-r* in more than 29% of cases.
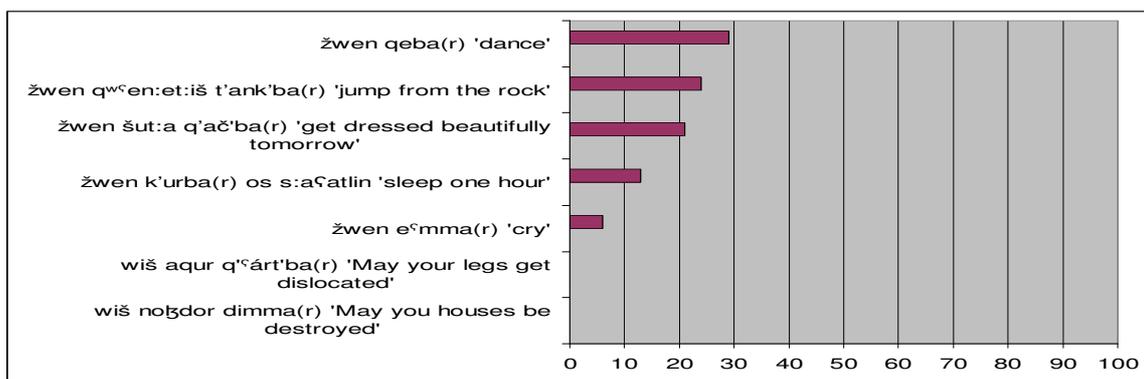
Figure 1. Frequency of -r with *bos*-verb (%).

Figure 2 illustrates the distribution of *r*-marking in the constructions with 3rd person subject. There is a significant difference between the constructions with human subject ('May your children be many') and the constructions with non-human subject ('May your sins multiply'). The frequency of *r*-marking in the constructions with 3rd person subject varies from 9% to 47%.
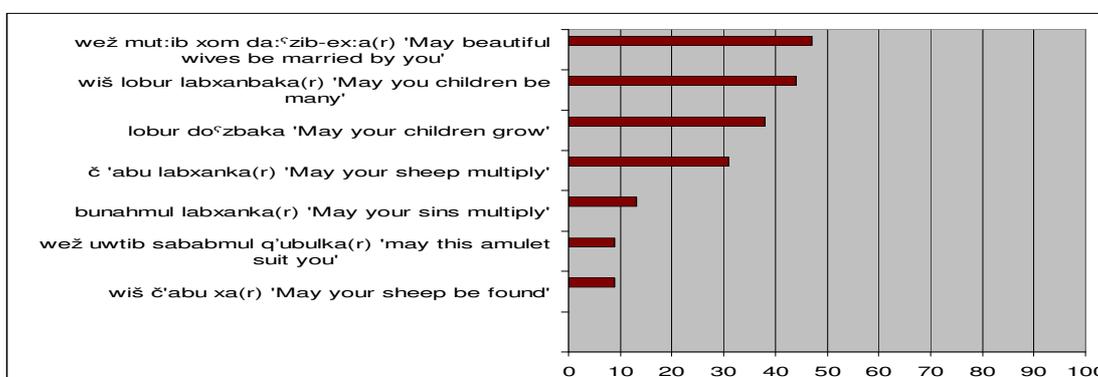

Figure 2. Frequency of plural marker -*r* with 3rd person subject (%).

Figure 3 illustrates the frequency of r-marking in the constructions with 2nd person subject (*bos*-verbs were not included). Most of sentences had -*r* in 90-100% of cases, apart from some uncontrollable actions ('Be jealous', 'May you rot') and the constructions with the verbs *dorq'as* 'curse' and *χʷet:as* 'swear', which rarely to very rarely had -*r* (26% and 9% respectively).

(19) *žʷen*   *to-r-mi-t:-ik*   *dorq'a-(r)*
you.PL.GEN   this-F-OBL-SUP-LAT   curse.IMP-IMP.PL
You curse her.

(20) *žʷen*   *χʷet:a-(r)*   *ja:mut* *t'allama-t'i*   *ba-lli*
you.PL.GEN   swear.IMP-IMP.PL   this.4   tell.truth-NNMLZ   say.IMP-CVB.IMP
'Swear that you say truth'

I have no explanation for these exceptions. Both verbs denote speech, but morphologically they are not derived from -*bos* 'say'. They have the infinitive in -*as*, and the verb *dorq'as* has masdar *dorq'mul*, while bos-verbs have masdar in -*t'i*. The most plausible explanation would be that these verbs is transitive, but it is not the case - they can not have an ergative subject. (Maybe they are simply aligned with speech verbs?)
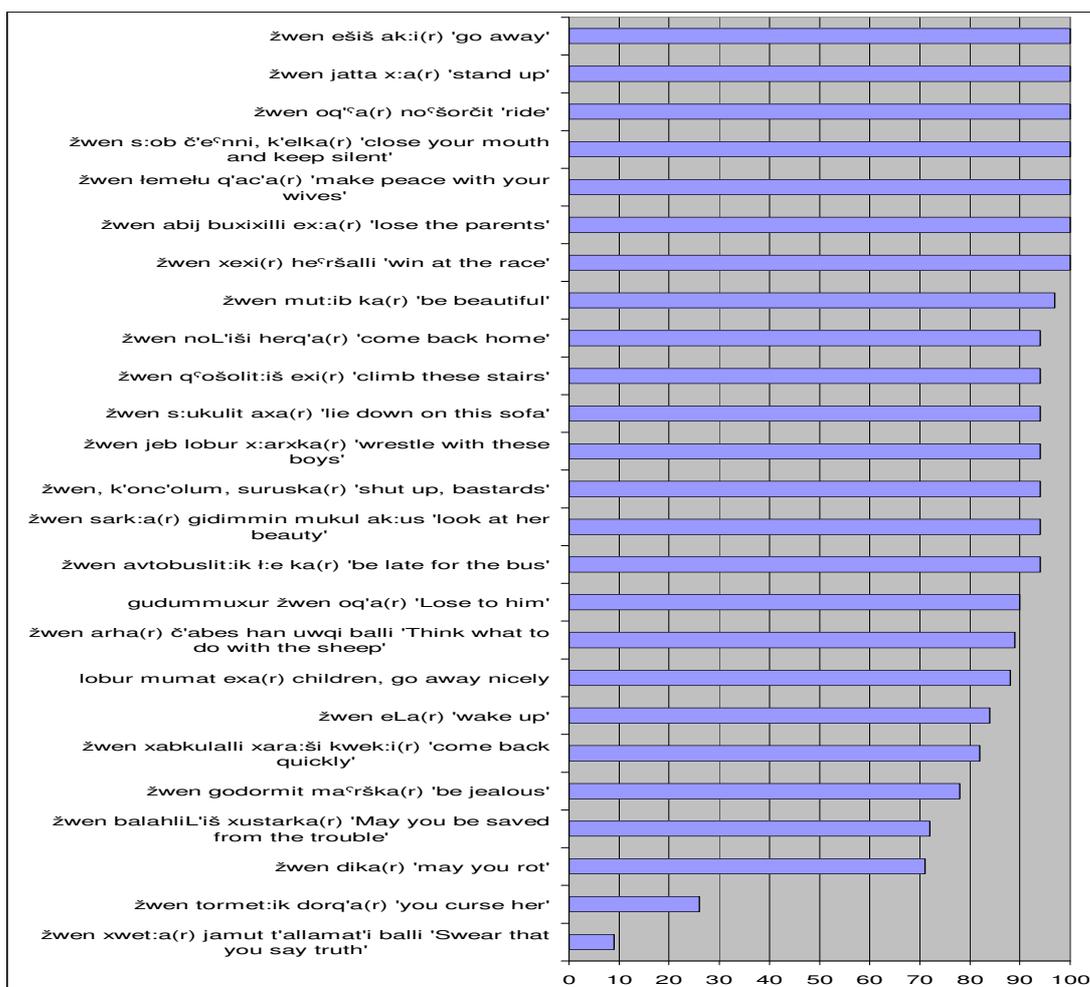
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Figure 3. Frequency of plural marker -r with 2nd person subject (without *bos*-verbs) (%).

The verb *labχankes* ('multiply, become numerous'; lit. 'many become') was used in three constructions. The frequency of *r*-marking reflects the type of subject (human (44%) - animate non-human (38%) - inanimate (31%)).

(21) *bunah-mul*   *labχan-ka-(r)*
     sin-NOM.PL   many-NPL.become-(IMP.PL)
May your sins multiply.

(22) *č'abu*   *labχan-ka-(r)*
     sheep.PL   many-NPL.become-(IMP.PL)
May your sheep multiply.

(23) *wiš*   *lo-bur*   *labχan-ba-ka-(r)*
     you.GEN.PL   child-NOM.PL   many-HPL-become-(IMP.PL)
May you children be many.

3.2.2. Social distribution
The experiment was carried out with 34 respondents, equally distributed re sex. The year of birth ranged from 1939 to 1996. The expectation was that the plural marking of imperative is undergoing a change, and younger people are using it less frequently than older. However, this was not the case - the age does not play any role in the distribution of -*r*, according to logistic regression analysis (courtesy Misha Daniel). The hypothesis about 'change in progress' is thus not supported by this data.

	f	m
1.	1946	1939
2.	1949	1940
3.	1963	1940
4.	1965	1955
5.	1970	1955

6.	1975	1955
7.	1976	1965
8.	1979	1967
9.	1981	1971
10.	1984	1976
11.	1988	1977
12.	1990	1984
13.	1990	1987
14.	1995	1988
15.	1995	1989
16.	1996	1991
17.	1996	1992

Table 2. Respondents - age and gender

4. Conclusion

The first interesting result was that on the level of particular construction the variation was not very significant. Most constructions either almost exclusively take -r, or almost exclusively did not. This result is in accordance with what we saw in corpus.
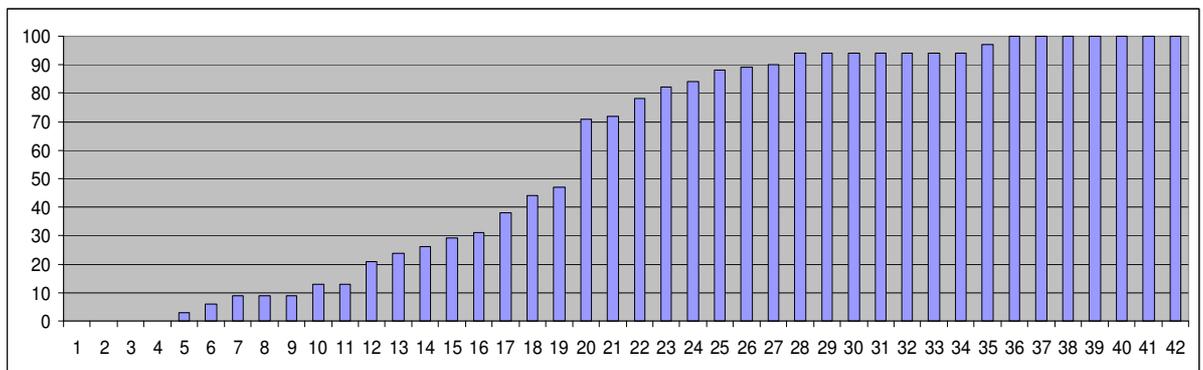

Fugure 4. The distribution of verbs according to the frequency of r-marking.

Second, it was found out that *bos*-verbs inherit the inability to be marked by -r even though they are not transitive with respect to argument coding.

Third, it was found that apart from the *bos*-verbs, the readiness of an imperative construction to attach *-r* correlates with the subject of construction. The following hierarchy of subjects was revealed:

ž^{w}en (you.PL) > 3rd person human > (3rd person animate nonhuman) > 3rd person inanimate

Finally, the interesting question is how this marker is related to the cross-linguistically rare category of *allocutive* - the agreement with a participant who is not an argument and often has no material representation in the clause (Адаскина 2010). In order to understand whether *-r* can be triggered by a participant which is not the argument, one must look for the constructions with singular first person subject and plural addressee. For all available data, it seems that in such constructions the imperative form cannot be marked by plural:

(24) *wiš lo mut:-ur **da-ka***
you.PL.GEN child beautiful-SG F-become
'May your daughter become beautiful!'

(25) **wiš   lo mut:-ur **da-ka-r***
you.PL.GEN child beautiful-SG F-become-**IMP.PL**
'May your daughter become beautiful!'

These examples and all other examples in this paper show that plural *-r* is triggered by the plural nominative (S) argument. But as I showed, the marker *-r* almost never shows up with nonhuman subject, and most frequently is used with second person plural nominative.

References

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Все факторы вместе
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Call:
glm(formula = R ~ movement + control + cursing.or.blessing +
    X3.person + animate.subject.human + inanimate.subject.or.nonhuman.subject
 +
    bos + gender + age, family = binomial, data = imperative)

Deviance Residuals:
    Min      1Q   Median      3Q      Max
-2.3071  -0.5797   0.3934   0.5853   2.1641

Coefficients: (1 not defined because of singularities)
                Estimate Std. Error z value Pr(>|z|)
```

	Estimate	Std. Error	z value	Pr(>|z|)	
(Intercept)	-2.505146	8.644727	-0.290	0.771978	
movement	1.386271	0.222481	6.231	4.64e-10	***
control	-0.637027	0.245281	-2.597	0.009401	**
cursing.or.blessing	-0.026826	0.307500	-0.087	0.930481	
X3.person	-2.449211	0.314047	-7.799	6.25e-15	***
animate.subject.human	0.993012	0.300302	3.307	0.000944	***
inan.or.nonhum.subject	NA	NA	NA	NA	
bos	-3.242343	0.222423	-14.577	< 2e-16	***
genderm	-0.116562	0.152732	-0.763	0.445356	
age	0.001684	0.004367	0.386	0.699746	

```
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Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

    Null deviance: 1894.1  on 1398  degrees of freedom
Residual deviance: 1173.6  on 1390  degrees of freedom
  (471 observations deleted due to missingness)
AIC: 1191.6

Number of Fisher Scoring iterations: 5
```

Отдельно возраст и пол:
```
Call:
glm(formula = R ~ gender * age, family = binomial, data = imperative)

Deviance Residuals:
    Min      1Q   Median      3Q      Max
-1.4351  -1.3170   0.9901   1.0317   1.1254

Coefficients:
            Estimate Std. Error z value Pr(>|z|)
(Intercept) 11.13591    9.77160   1.140   0.2544
genderm    -23.02952   12.87244  -1.789   0.0736 .
age         -0.00542    0.00494  -1.097   0.2725
genderm:age  0.01162    0.00652   1.782   0.0748 .
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

(Dispersion parameter for binomial family taken to be 1)

```
    Null deviance: 1894.1  on 1398  degrees of freedom
Residual deviance: 1889.9  on 1395  degrees of freedom
  (471 observations deleted due to missingness)
AIC: 1897.9
```

Number of Fisher Scoring iterations: 4